REMARKS/ARGUMENTS

Claims 1, 3, 5-12 and 22-31 remain in the application, all of which stand rejected. Claims 2, 4 and 13-21 have been canceled, but may be pursued in a continuation application without prejudice.

1. Rejection of Claims 1, 3, 5-10, 12, 22-24 and 26-31 Under 35 USC 103(a)

Claims 1, 3, 5-10, 12, 22-24 and 26-31 stand rejected under 35 USC 103(a) as being unpatentable over Olshansky et al. (US Pat. No. 5,134,509; hereinafter "Olshansky") in view of Taylor (US Pub. Pat. App. No. 2004/0114939 A1).

Claim 1 recites, in part, "a first conversion unit for performing a first heterodyne operation on an optical input signal to generate an electrical IF signal, the first conversion unit comprising i) a local oscillator for generating a swept local oscillator signal". In rejecting claim 1, the Examiner asserts that Olshansky teaches a local oscillator as element "LO laser 52", shown in FIG. 4. However, the Examiner does not specifically indicate where Olshansky teaches a local oscillator for generating "a ***swept*** local oscillator signal".

In col. 8, lines 14-54, Olshansky describes the various elements of the "coherent subcarrier multiplexed optical communication system" shown in FIG. 4. In describing this system, Olshansky indicates that LO laser 52 may be "a fixed local oscillator laser 52" (col. 8, lines 19-20) or "a tunable local oscillator laser 52" (col. 8, line 42). Olshansky indicates that making the LO laser 52 "tunable" helps "to achieve selection of the desired microwave subcarrier" (col. 8, lines 43-44). The need for such tunability makes sense given that Olshansky's disclosure is directed to an "optical communication system", including the transmitters and receivers thereof. However, a ***tunable*** local oscillator signal is not equivalent to a ***swept*** local oscillator signal. Furthermore, coupling an optical signal with a ***tuned*** local oscillator signal to generate an electrical IF signal is not equivalent to "coupling said optical input signal and said ***swept*** local oscillator signal" to generate an electrical IF signal (the latter

being recited in applicants' claim 1). Applicants do not believe that Olshansky's teaching of a tuned local oscillator would motivate one of ordinary skill in the art to operate the local oscillator in a "swept" fashion - especially given the fact that Olshansky's disclosure is directed to an optical communication system where one is looking to filter and receive certain signal frequencies, and applicants' claim 1 is directed to a detection method where one may be looking to discover what frequencies exist in an optical signal.

Taylor also fails to show a local oscillator operated in a swept fashion.

Claim 1 is believed to be allowable over the combination of Olshansky's and Taylor's teachings for at least the above reasons.

Claim 5 is believed to be additionally allowable over Olshansky's and Taylor's teachings, because neither Olshansky nor Taylor disclose signal processing that reconstructs "an optical ***spectrum***" of an optical input signal.

Claims 3, 6-10 and 12 are believed to be allowable, at least, because they depend directly or indirectly from claim 1.

Claims 22, 23 and 26-30 are believed to be allowable, at least, for reasons similar to why claim 1 is believed to be allowable.

Claim 24 is believed to be additionally allowable over Olshansky's and Taylor's teachings, because neither Olshansky nor Taylor disclose "filtering said IF signal to reject a first image from a pair of images in said IF signal". In fact, neither Olshansky nor Taylor contain any discussion of why it might be desirable to reject one image in a "pair of images" in an IF signal. This is because neither Olshansky nor Taylor operate a local oscillator of a heterodyne conversion unit in a "swept" fashion, and thus, neither Olshanksy nor Taylor has to worry about an IF signal containing a "pair of images" (which result from the swept local oscillator signal crossing frequencies that are both above and below the frequency of an optical input signal).

2. Rejection of Claim 11 Under 35 USC 103(a)

Claim 11 stands rejected under 35 USC 103(a) as being unpatentable over Olshansky et al. (US Pat. No. 5,134,509; hereinafter "Olshansky") in view of Taylor (US Pub. Pat. App. No. 2004/0114939 A1) and Graves et al. (US Pat. No. 3,975,628; hereinafter "Graves").

Claim 11 is believed to be allowable, at least, because 1) it depends from claim 1, and 2) Graves fails to disclose that which is missing from the combined teachings of Olshansky and Taylor (*see*, sec. 1 of these Remarks/Arguments). In addition, claim 11 is believed to be allowable because Graves does not disclose "a band pass filter coupled to said first conversion unit", as the Examiner indicates is taught in Graves' FIG. 4 and col. 6. Rather, Graves only appears to disclose a "frequency discriminator 42" for separating low frequencies from high frequencies, and a "highpass filter 31". Neither of these appears to be a band pass filter. Furthermore, neither of these filters is coupled to Graves' "first conversion unit". Rather, these filters appear to be coupled to Graves' "second conversion unit". If the Examiner believes that applicants are overlooking some of Graves' teachings, applicants ask that the Examiner be more specific in indicating what specific element(s) of Graves' system is/are equivalent to the band pass filter recited in applicants' claim 11.

3. Rejection of Claim 25 Under 35 USC 103(a)

Claim 25 stands rejected under 35 USC 103(a) as being unpatentable over Olshansky et al. (US Pat. No. 5,134,509) in view of Taylor (US Pub. Pat. App. No. 2004/0114939 A1) and Tsushima et al. (US Pat. No. 5,305,134; hereinafter "Tsushima").

Claim 25 is believed to be allowable, at least, because 1) it depends from claim 22, and 2) Tsushima fail to disclose that which is missing from the combined teachings of Olshansky and Taylor (*see*, sec. 1 of these Remarks/Arguments).

4. Conclusion

In light of the remarks provided herein, applicants respectfully request the issuance of a Notice of Allowance.

Respectfully submitted,
HOLLAND & HART, LLP

By: _____

Gregory W. Osterloth
Reg. No. 36,232
Tel: (303) 295-8205